

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
14 July 2005 (14.07.2005)

PCT

(10) International Publication Number
WO 2005/064726 A2

(51) International Patent Classification⁷: **H01M 8/02**, 8/24

(21) International Application Number:
PCT/JP2004/019787

(22) International Filing Date:
24 December 2004 (24.12.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2003-433266 26 December 2003 (26.12.2003) JP
2004-349941 2 December 2004 (02.12.2004) JP

(71) Applicant (for all designated States except US): **TOYOTA JIDOSHA KABUSHIKI KAISHA** [JP/JP]; 1, Toyota-cho, Toyota-shi, Aichi 4718571 (JP).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **SUZUKI, Hiroshi** [JP/JP]; c/o Toyota Jidosa Kabushiki Kaisha, 1, Toyota-cho, Toyota-shi, Aichi 4718571 (JP). **TEJIMA, Go** [JP/JP]; c/o Toyota Jidosa Kabushiki Kaisha, 1, Toyota-cho, Toyota-shi, Aichi 4718571 (JP). **NAKASHIMA,**

Tomoaki [JP/JP]; c/o Toyota Jidosa Kabushiki Kaisha, 1, Toyota-cho, Toyota-shi, Aichi 4718571 (JP). **AKAGAWA, Ryo** [JP/JP]; c/o Toyota Jidosa Kabushiki Kaisha, 1, Toyota-cho, Toyota-shi, Aichi 4718571 (JP).

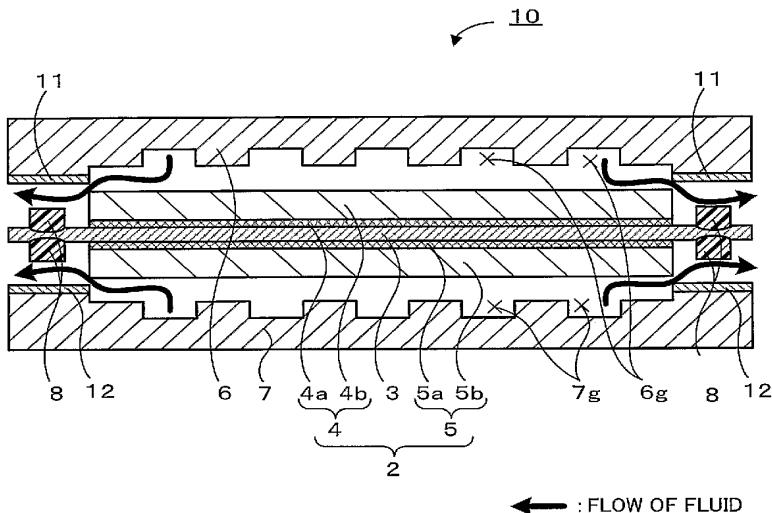
(74) Agent: **ITEC INTERNATIONAL PATENT FIRM**; Pola-Nagoya Bldg., 9-26, Sakae 2-chome, Naka-ku, Nagoya-shi, Aichi 4600008 (JP).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,

[Continued on next page]

(54) Title: FUEL CELL DISASSEMBLY METHOD AND FUEL CELL



← : FLOW OF FLUID

WO 2005/064726 A2

(57) Abstract: A process of disassembling a fuel cell 10 supplies a fluid to both a fuel gas conduit 6g and an oxidizing gas conduit 7g. Since outlets of the respective gas conduits 6g and 7g are shielded, the internal pressure or in-passage pressure of the respective gas conduits 6g and 7g gradually rises and eventually exceeds a specific in-passage pressure level for power generation of the fuel cell 10. The high in-passage pressure expands a gas diffusion electrode 4b of a membrane electrode assembly (MEA) 2 and a separator 6, which define the fuel gas conduit 6g, in opposite directions to make a clearance between the gas diffusion electrode 4b and the separator 6. Similarly the high in-passage pressure expands a gas diffusion electrode 5b of the MEA 2 and a separator 7, which define the oxidizing gas conduit 7g, in opposite directions to make a clearance between the gas diffusion electrode 5b and the separator 7. The supplied fluid then flows out through these clearances into seals between the separators 6 and 7 and the MEA 2. These flows raise the in-passage pressure and release the seals.



SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN,
GQ, GW, ML, MR, NE, SN, TD, TG).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Published:

- *without international search report and to be republished upon receipt of that report*